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10/593,458	09/19/2006	Frank-Martin Wille	PNL21563	9971

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EXAMINER	
DAGER, JONATHAN M	

ART UNIT	PAPER NUMBER
3663	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,458	WILLE ET AL.	
	Examiner	Art Unit	
	JONATHAN M. DAGER	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *19 September 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 1-2 filed 08 July 2009, with respect to the prior Election/Restriction requirement have been fully considered and are persuasive. Therefore, the prior Election/Restriction requirement has been WITHDRAWN.

There being no further restriction requirement at this time, the claims will be treated on their merits.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 7, and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the data field", and "the ID field" in the claimed language. There is insufficient antecedent basis for this limitation in the claim.

Claims 7 recites the limitation "the data field", "the ID field", and "the information field" in the claimed language. There is insufficient antecedent basis for this limitation in the claim.

Claim 32 recites a "Control module for control of a function of the motor vehicle and/or for especially optical and/or acoustic output…"

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim

does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

Subsequently, all claims descendent therefrom are rejected under identical grounds due to similar terminology and dependency (33-38, 41, and 42).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9, 11-22, and 24-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Kikkawa (US 2002/003781).

Regarding claims 1, 11, 32 (as best understood), and 39-43, Kikkawa has disclosed a system and method relating to a multiplex communication system, including a data relay unit which has a plurality of send/receive (SR) sections. Communication lines are connected to the

respective SR sections, and nodes are connected to the communication lines. The data relay unit further includes a destination table and header tables. In the data relay unit, a data frame sent from a node is received by one of the SR sections, and the SR sections which ought to send the data frame are identified by referring to the destination table. A header according to the appropriate communication protocol is formed by referring to one of the header tables. Further the data frame including the formed header is formed and sent to the destination node by the identified SR sections. When nodes are added or eliminated, this system can be reconfigured only by modifying or replacing the destination table and the header tables (abstract). Further, Kikkawa has disclosed that the invention is drawn toward the field of multiplex communications in vehicles (para 0002-0009).

Thus, Kikkawa has disclosed a communications system for a vehicle for transmission of information relating to the operation of the vehicle from a sending control device to a receiving control device, the communication system comprising an interface (data relay unit) for input or output of the information relating to the operation of the motor vehicle wherein communication is possible by way of the interface.

Kikkawa also discloses that Preferably, the data relay unit includes a plurality of header tables corresponding to different communication protocols. In this case, the data relay unit can relay data received from a node connected to a communication line which employs a communication protocol to a node connected to a communication line which employs another communication protocol (para 0013).

Thus, the interface of Kikkawa discloses that the interface processes all data by means of a protocol.

Kikkawa discloses that the nodes belonging to the same network communicate each other by exchanging data frames formed according to the communication protocol employed by the network. Each data frame includes not only a data body but also a header including a data type field so that the destination node of the data frame can use the data body. The data types are `engine speed`, `vehicle speed`, `opened/closed state of the doors` or the like. The destination node receives the data frame, and then determines from the content of the header whether the data body includes data required for the node or what type of data the data body includes (para 0028).

Thus, in one case, the communication protocol does include an operation field for identification of the task to be performed by means of the information relating to operation of the vehicle.

Regarding claims 2-4, 14-17, 21, 24-29, 33, 34, 37, and 44, as best understood, Kikkawa discloses that when the navigation ECU 342 presumes that a vehicle is approaching a sharp bend, it notifies the engine ECU 321 that it is required to decrease engine torque and direct the meter ECU 312 to show a driver that the vehicle has shifted to a navigation cooperative control mode as follows. The navigation ECU 342 forms an IE-BUS data frame which includes data representing that it is required to decrease the engine torque. In the formed IE-BUS frame, the data ID is set to `$57`. The navigation ECU 342 sends the IE-BUS frame over the communication line 24 in the IE-BUS network 14 (para 0046).

Regarding claim 5-8, 12, 13, 18-20, 35, 36, and 45, as best understood, Kikkawa discloses that in one of the protocols used, header of each data frame according to ISO9141 protocol includes `Format Byte`, `Target Address`, `Source Address `, `Mode`, and `PID`. The content of the `Target Address' field and the content of the `PID` field cooperatively represent the data type of data included in the data body (data) (para 0031).

Regarding claims 9, 23, 31, and 38, as best understood, in addition to what is cited above, in fig 3A Kikkawa clearly discloses that the header of each data frame according to BEAN protocol includes `SOF`, `Priority`, `Message Length`, `Destination ID`, and `Message ID`. The content of the `Destination ID field is destination node ID or `broadcast`. The content of the `Message ID field represents the data type of data included in the data body (data in FIG. 3A) (para 0029).

Regarding claim 30, as best understood, Kikkawa discloses that if the relay unit 4 determines that a data frame is received by the BEAN SR section 411 at step 101, the received data frame is temporarily stored in a receive frame buffer 42 at step 102. If the data relay unit 4 determines that a data frame is received by the other SR sections 412-414 at steps 103, 105, 107, the received data frame is temporarily stored in the receive frame buffer 42 at steps 104, 106, 108 similarly. The receive frame buffer 42 is provided for each data ID which represents the data type. A predetermined area of a RAM is allocated for the receive frame buffers 42 (para 0035).

Regarding claim 46, Kikkawa discloses that the fourth network 14 includes a display ECU 341, a navigation ECU 342, audio ECU 343, and the like as nodes. In the fourth network 14, communication between the nodes is performed according to communication protocol IE-BUS. The display ECU 341 is integrated with control switches for a display. The failure diagnosis unit 33 is connected to the third network 13 when the vehicle is repaired in a repair shop. Failure information or operation information of various parts of the vehicle is sent from the nodes 311, 312, 313, 321, 322, 341, 342, 343 in the other networks 11, 12, 14 to the failure diagnosis unit 33 via the data relay unit 4. The failure diagnosis unit 33 provides the received information for repair of the vehicles (para 0026).

Regarding claims 47 and 48, Kikkawa clearly discloses in fig. 1 all control systems which can interact over the interface(s).

Drawings and pictures can anticipate claims if they clearly show the structure which is claimed. See MPEP 2125.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikkawa, as applied to claim above, and further in view of Boesinger (US 2002/0046309).

Regarding claims 10 and 23, Kikkawa, as applied to claims 1 and 12 above does not explicitly disclose that the protocol does not comprise a designation of the receiving control device.

Boesinger does teach that it is know that a component provided at the CAN data bus is assigned such an IP address so that it can be addressed from the Internet. Within the CAN data bus, however, the individual components are not addressed with a network or device address designating the components but with the identifier normally used in the CAN protocol which allocates a particular priority to each message. Thus, no address is issued for the destination component in the CAN, but the message itself is identified via the identifier and can thus be distinguished from the other messages. In principle, each of the messages is then received by each component, the components then selecting the individual messages on the basis of the identifier. In this arrangement, each component must contain a listing of which message having which identifier is to be received. In CAN, the messages are thus not concatinated (sic) with addresses which describe a certain destination component at the data bus, but with identifiers which designate a certain message. The CAN data bus does not have any addressing in the sense that destination addresses are issued (para 0006).

Thus, it is known that a protocol does not have to contain a designation of a receiving control device address.

Kikkawa has disclosed a base invention which is capable of all functions of the claimed embodiments, including a communication system using various protocols to relay information

regarding various tasks to be performed in a vehicle. Where Kikkawa is deficient, with respect to claims 10 and 23 is that Kikkawa does not explicitly disclose that the protocol doesn't have to contain a receiving address. Boesinger has cured this deficiency in a similar invention relating to communication in a vehicle communication network.

Thus, since both inventions both disclose/teach similar elements and usage, it would have been obvious to one of ordinary skill in the art at the time of the invention to simply substitute one apparatus into the other, or at least combine their respective elements, to achieve no more than the predictable result of a communication protocol which does not designate the receiving control device.

Combining prior art elements according to known methods to yield predictable results is a rationale to support a conclusion of obviousness. See MPEP 2143(A).

Simple substitution of one known element for another to obtain predictable results will support a conclusion of obviousness. See MPEP 2143 (B).

7. It is noted that claim 1, 11-13, 24-29, 31, 32, and 39 contain multiple statements of intended use or field of use (e.g. "for transmission", "wherein…is transmitted", "for controlling", etc.). These statements of intended use or field of use, and "wherein" clauses, are essentially method limitations. Thus, these claims, as well as other statements of intended use, do not serve to patentably distinguish the claimed structure over that of the reference.

See MPEP § 2114 which states:

> A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim.

> Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions.
>
> Apparatus claims cover what a device is not what a device does.

As set forth in MPEP § 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

Additionally, the terms “configured to" or "arranged to" are considered to be structurally modified statements and are not intended use. Claims amended to include the above listed language may patentably distinguish themselves structurally.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN M. DAGER whose telephone number is (571)270-1332. The examiner can normally be reached on 0830-1800 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JD
01 October 2009

/Jack W. Keith/
Supervisory Patent Examiner, Art Unit 3663